

## Claims.

1. Element for the casting of a liquid metal, comprising a base body made from a refractory material, said body comprising an outer surface and an inner surface defining a pouring channel for the casting of the liquid metal, **characterized in that** at least a part of the element inner surface is coated with an insulating coating comprising insulating hollow microspheres, preferably in an amount comprised between 5 and 40 weight % and forming, at the metal liquid contact, a gas impermeable layer.
2. Casting element according to claim 1, **characterized in that** the coating comprises 20 to 80 weight % of a ceramic matrix, preferably comprising silica or alumina.
3. Casting element according to claim 2, **characterized in that** the ceramic matrix comprises vitreous grains, such a atomized silica.
4. Casting element according to any one of claims 1 to 3, **characterized in that** the thickness of the coating is comprised between 1 and 10 mm.
5. Casting element according to any one of claims 1 to 4, **characterized in that** the impermeable layer and the refractory material are interpenetrated.
6. Casting element according to any one of claims 1 to 5, **characterized in that** the base body is constituted from a carbon bonded material.
7. Casting element according to any one of claims 1 to 6, **characterized in that** the casting element is a pouring shroud.
8. Casting element according to any one of claims 1 to 7, **characterized in that** at least a part of the external surface is coated with an insulating coating comprising insulating microspheres, preferably in an amount comprised between 5 and 40 weight %.
9. Process for coating a casting element comprising a base body made from a refractory material, said body comprising an outer surface and an inner surface defining a pouring channel for the casting of the liquid metal, **comprising the steps of**
  - preparing a slip comprising insulating hollow microspheres,
  - drying the slip at room temperature, preferably for at least two hours.
  - forming a gas impermeable layer from the dried slip by contacting the dried slip with liquid metal.